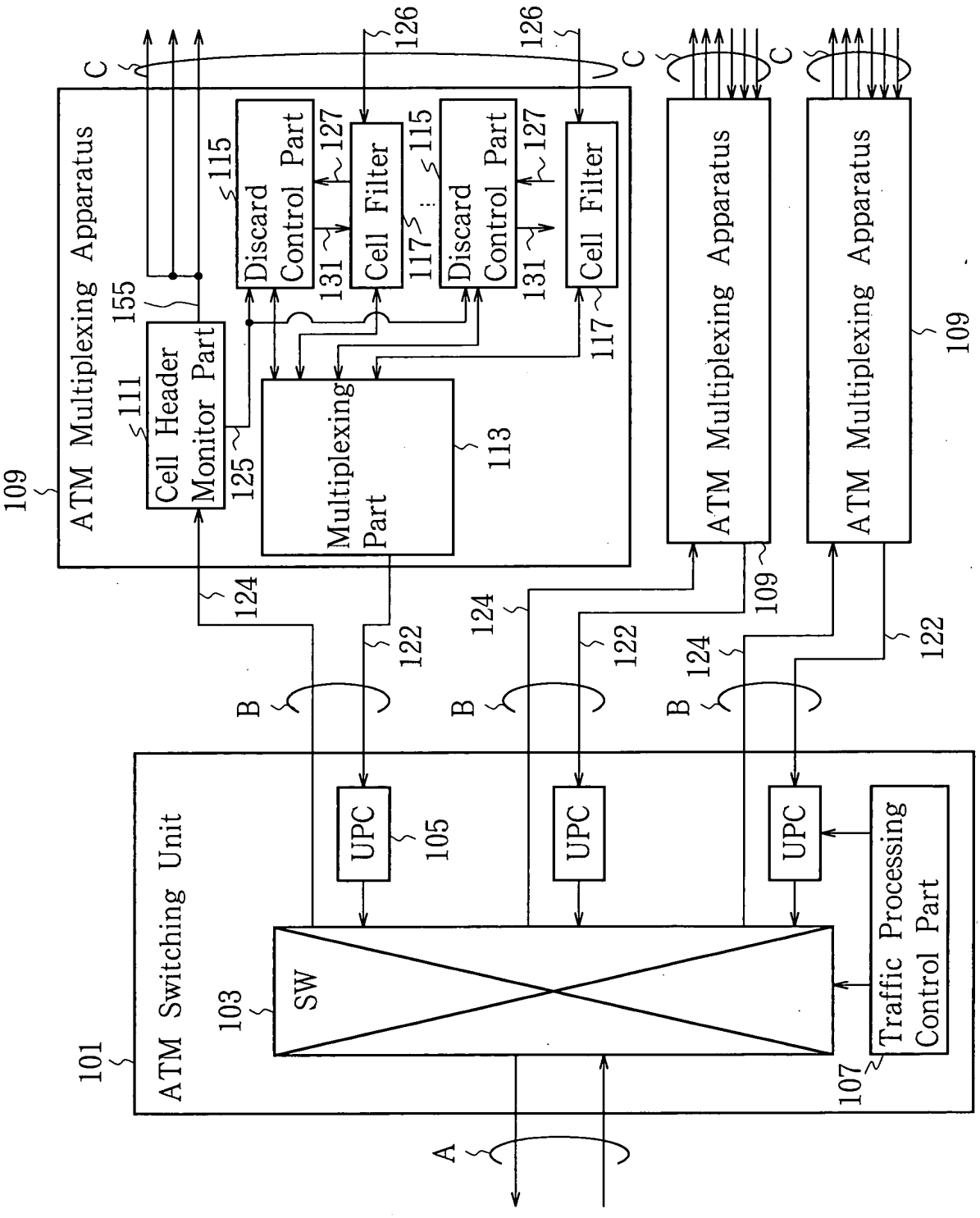
ATM Switching Unit
101
SW
103
UPC
105
Traffic Processing Control Part
107
ATM Multiplexing Apparatus
109
Cell Header Monitor Part
111
155
125
Multiplexing Part
113
Discard Control Part
115
Cell Filter
117
131
127
126
124
122
A
B
C

FIG.1

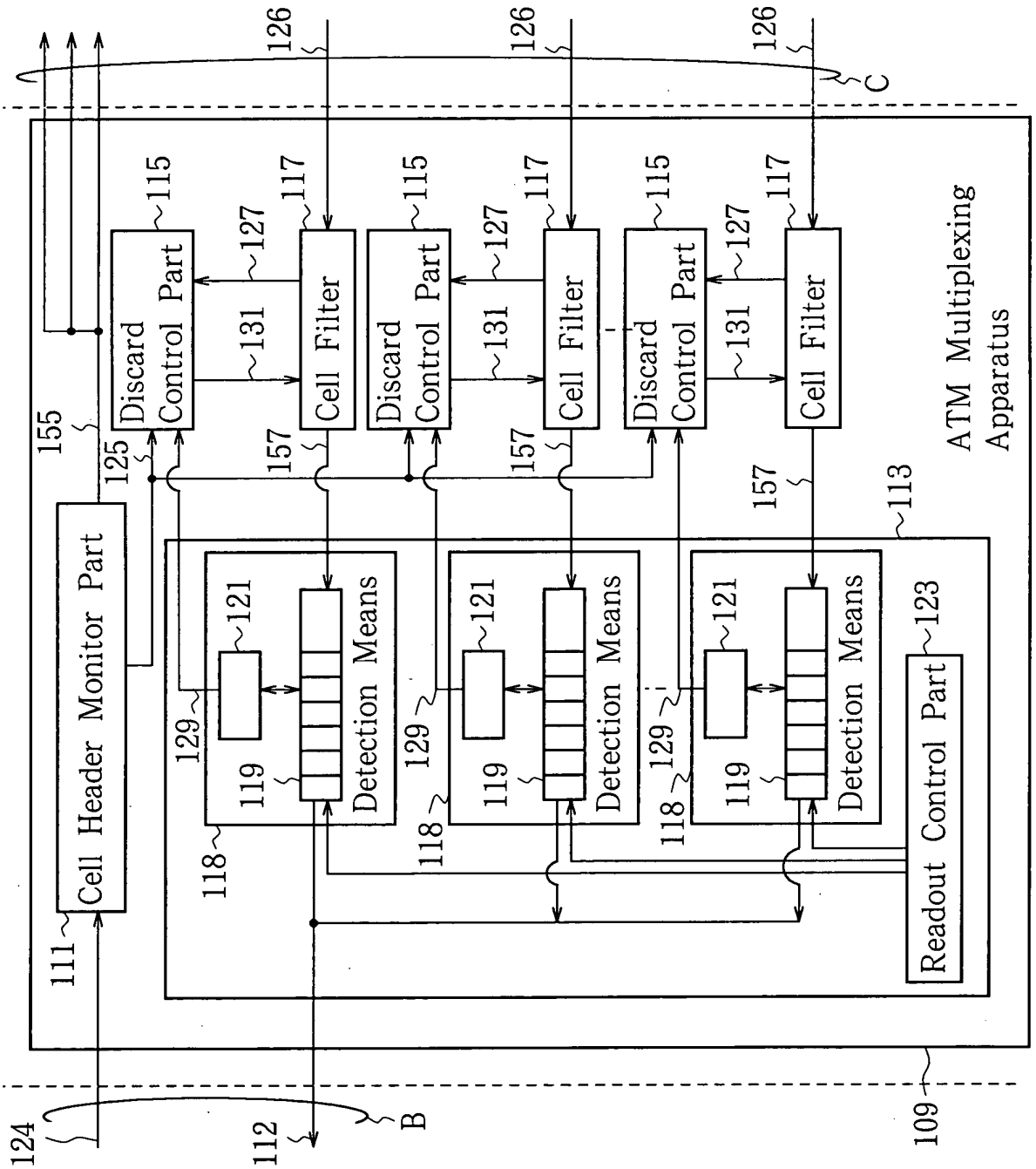
ATM Multiplexing Apparatus
Cell Header Monitor Part
Discard Control Part
Cell Filter
Detection Means
Readout Control Part
111
112
113
115
117
118
119
121
123
124
125
126
127
129
131
155
157
109
B
C

FIG.2

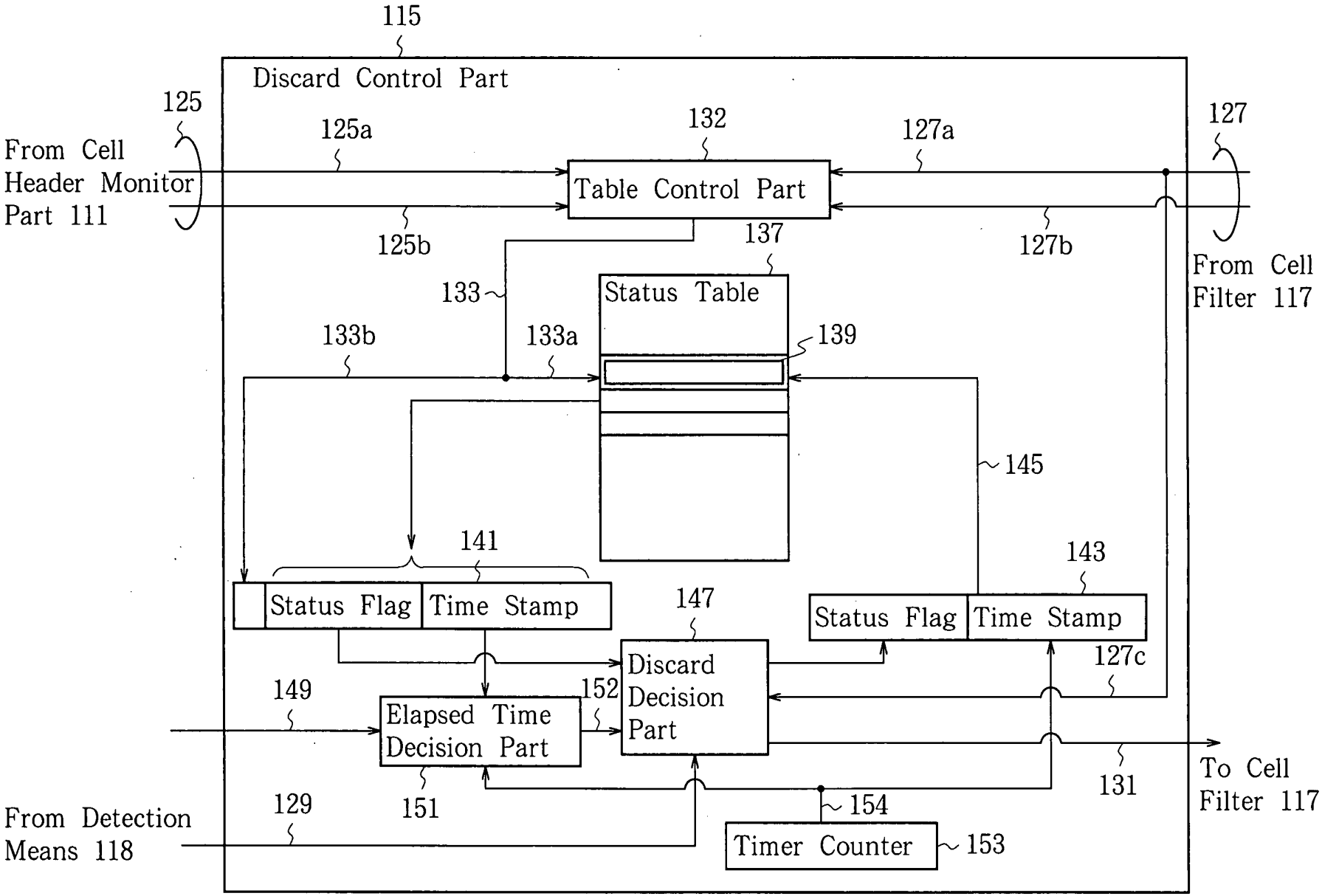
115
Discard Control Part
125
From Cell Header Monitor Part 111
125a
125b
132
Table Control Part
127a
127b
127
From Cell Filter 117
137
133
Status Table
133b
133a
139
145
141
143
Status Flag
Time Stamp
147
Status Flag
Time Stamp
127c
149
152
Elapsed Time Decision Part
Discard Decision Part
131
To Cell Filter 117
129
151
154
From Detection Means 118
Timer Counter
153

FIG.3

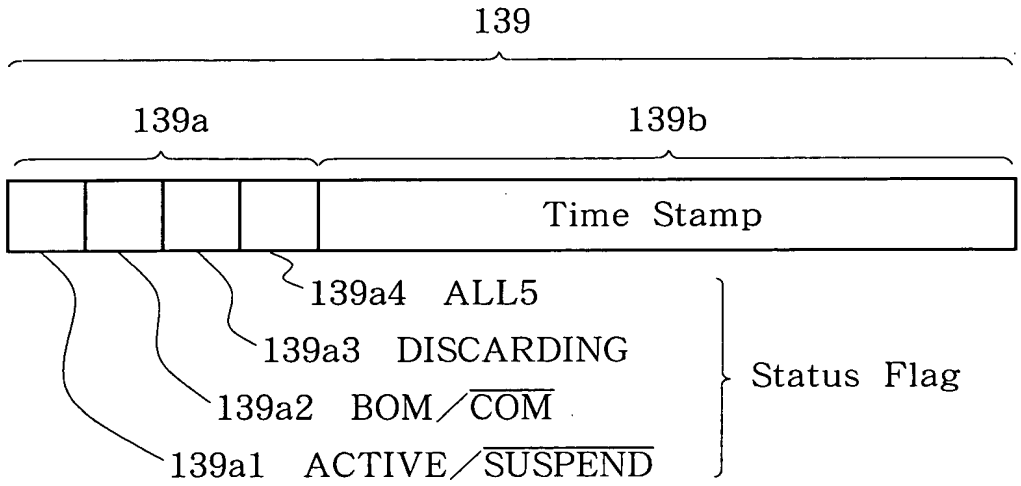

FIG.4

09453500 - 041003

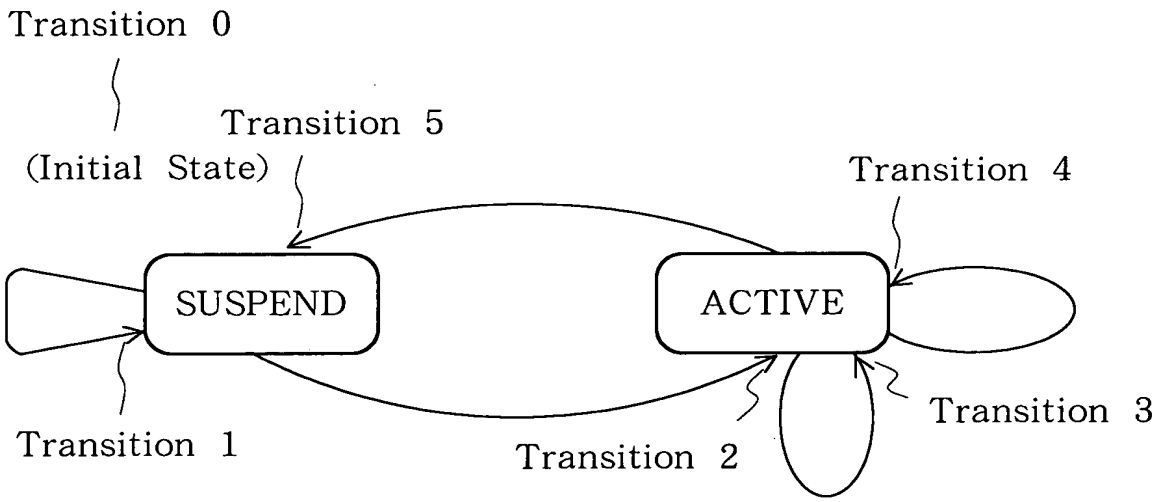
Transition 0
Transition 5
(Initial State)
Transition 4
SUSPEND
ACTIVE
Transition 1
Transition 2
Transition 3

FIG.5a

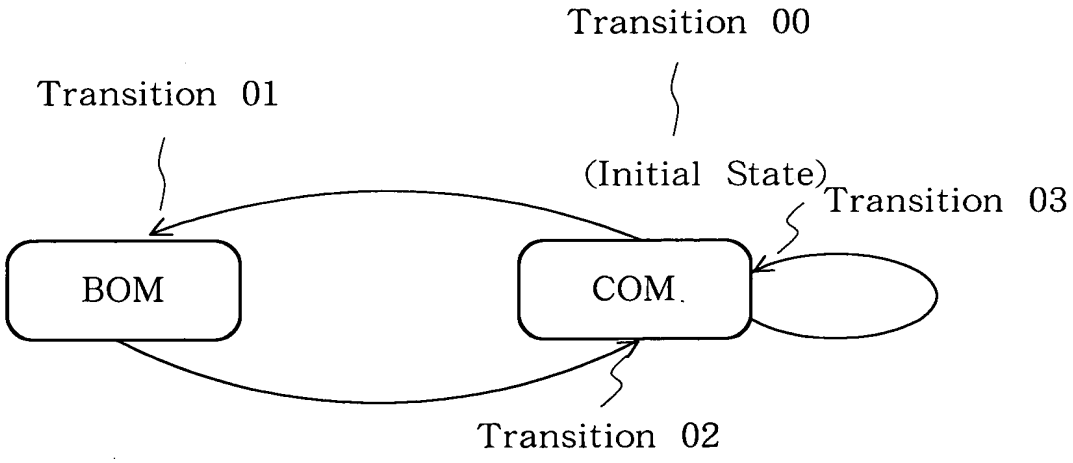
Transition 00
Transition 01
(Initial State)
Transition 03
BOM
COM
Transition 02

FIG.5b

	Level Value	Updated Status Flag	Control
Decision 1	×	DISCARDING & PTI = × × 0	Discard
Decision 2	1	SUSPEND & BOM	
		SUSPEND & COM	
Decision 3	0	ACTIVE & BOM	Pass
		ACTIVE & COM	

FIG.6a

	Level Value	Updated Status Flag	Control
Decision 1	× × ×	DISCARDING & PTI = × × 0	Discard
Decision 2	001	SUSPEND & BOM	
Decision 3	011	SUSPEND & COM	
Decision 4	111	ACTIVE & BOM	Pass
Decision 5	000	ACTIVE & COM	

FIG.6b

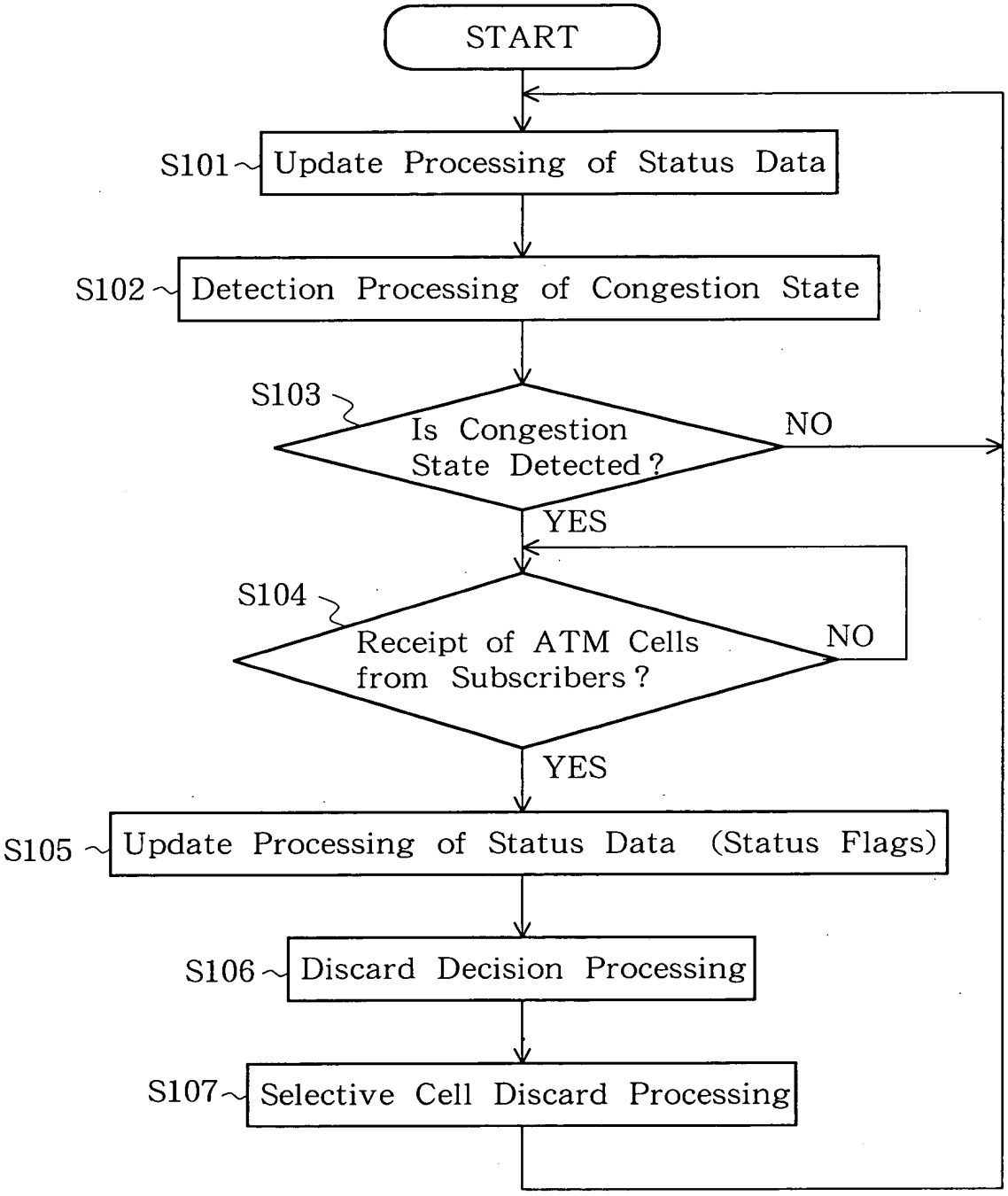
START
S101
Update Processing of Status Data
S102
Detection Processing of Congestion State
S103
Is Congestion State Detected ?
NO
YES
S104
Receipt of ATM Cells from Subscribers ?
NO
YES
S105
Update Processing of Status Data (Status Flags)
S106
Discard Decision Processing
S107
Selective Cell Discard Processing

FIG.7

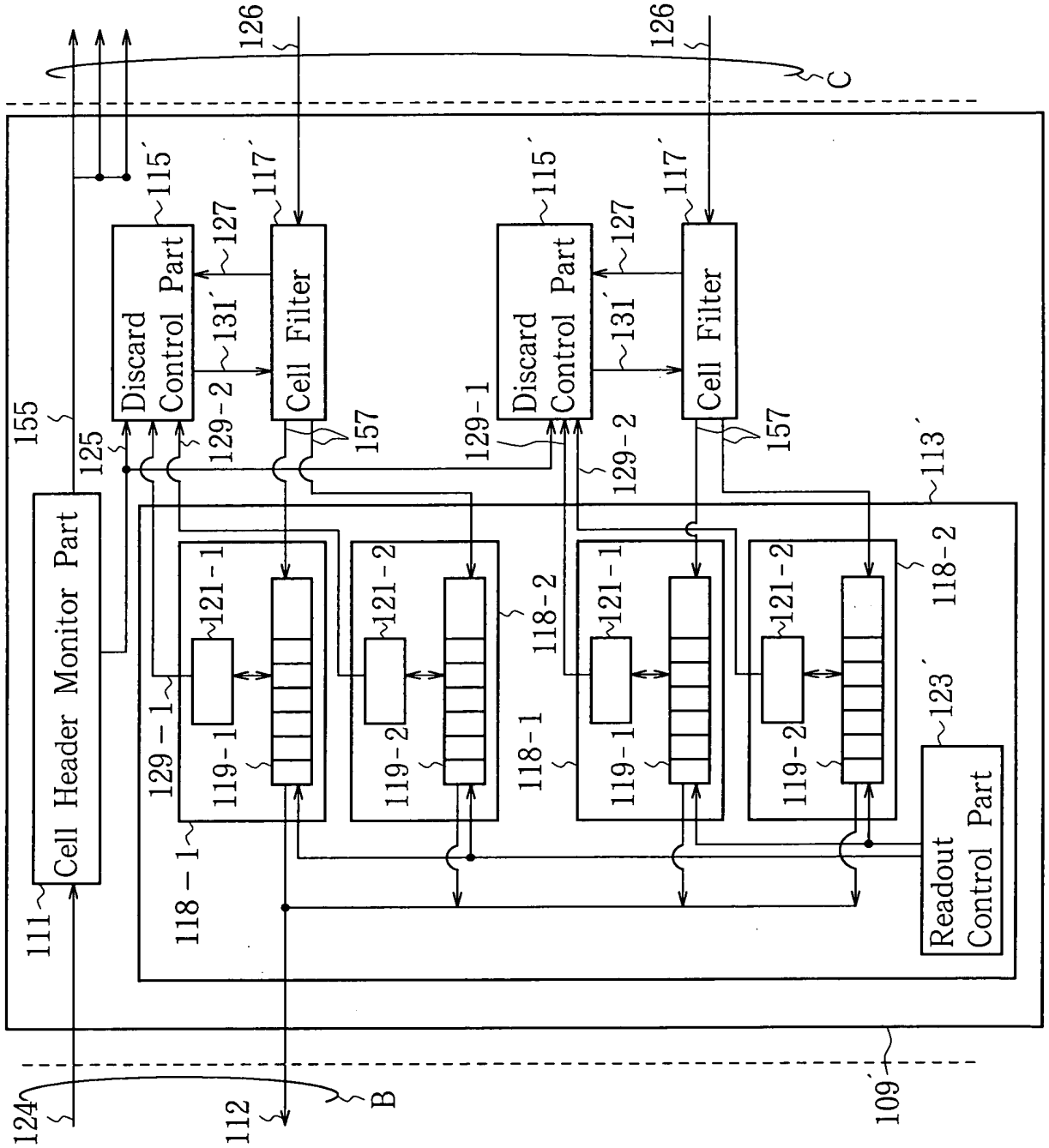
Cell Header Monitor Part
Discard Control Part
Cell Filter
Discard Control Part
Cell Filter
Readout Control Part
111
115´
117´
115´
117´
123´
125
126
126
127
127
129-1
129-2
129-1
129-2
131´
131´
155
157
157
113´
118-1
118-2
118-1
118-2
119-1
119-2
119-1
119-2
121-1
121-2
121-1
121-2
124
112
B
C
109´

FIG.8

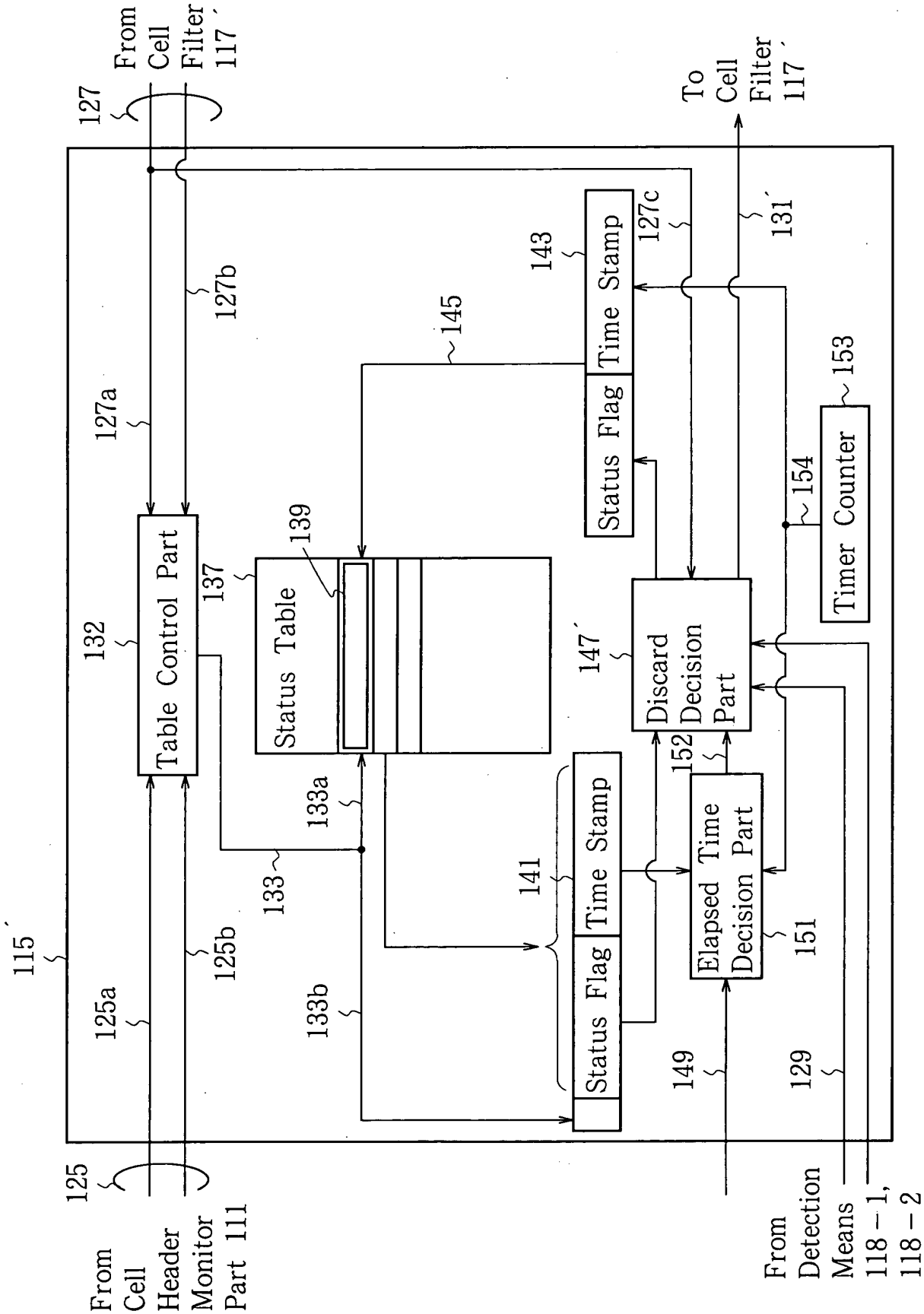
From Cell Header Monitor Part 111
125
From Cell Filter 117´
127
To Cell Filter 117´
115´
125a
125b
127a
127b
127c
131´
132
Table Control Part
133
133a
133b
137
Status Table
139
141
Status Flag
Time Stamp
143
145
147´
Discard Decision Part
149
151
152
Elapsed Time Decision Part
153
Timer Counter
154
129
From Detection Means 118 – 1, 118 – 2

FIG.9

	Level Value 1 (129 – 1)	Level Value 2 (129 – 2)	Updated Status Flag	Control
Decision 1	×	×	DISCARDING & PTI = × × 0	Discard
Decision 2	1	1	SUSPEND & BOM	Discard
			SUSPEND & COM	
Decision 3	0	1	SUSPEND & BOM	Pass : To Storage Means 119-1
			SUSPEND & COM	
Decision 4	1	0	SUSPEND & BOM	Pass : To Storage Means 119-2
			SUSPEND & COM	
Decision 5	0	0	ACTIVE & BOM	Pass : To Storage Means 119-1
			ACTIVE & COM	

FIG.10

0354202-1 20050

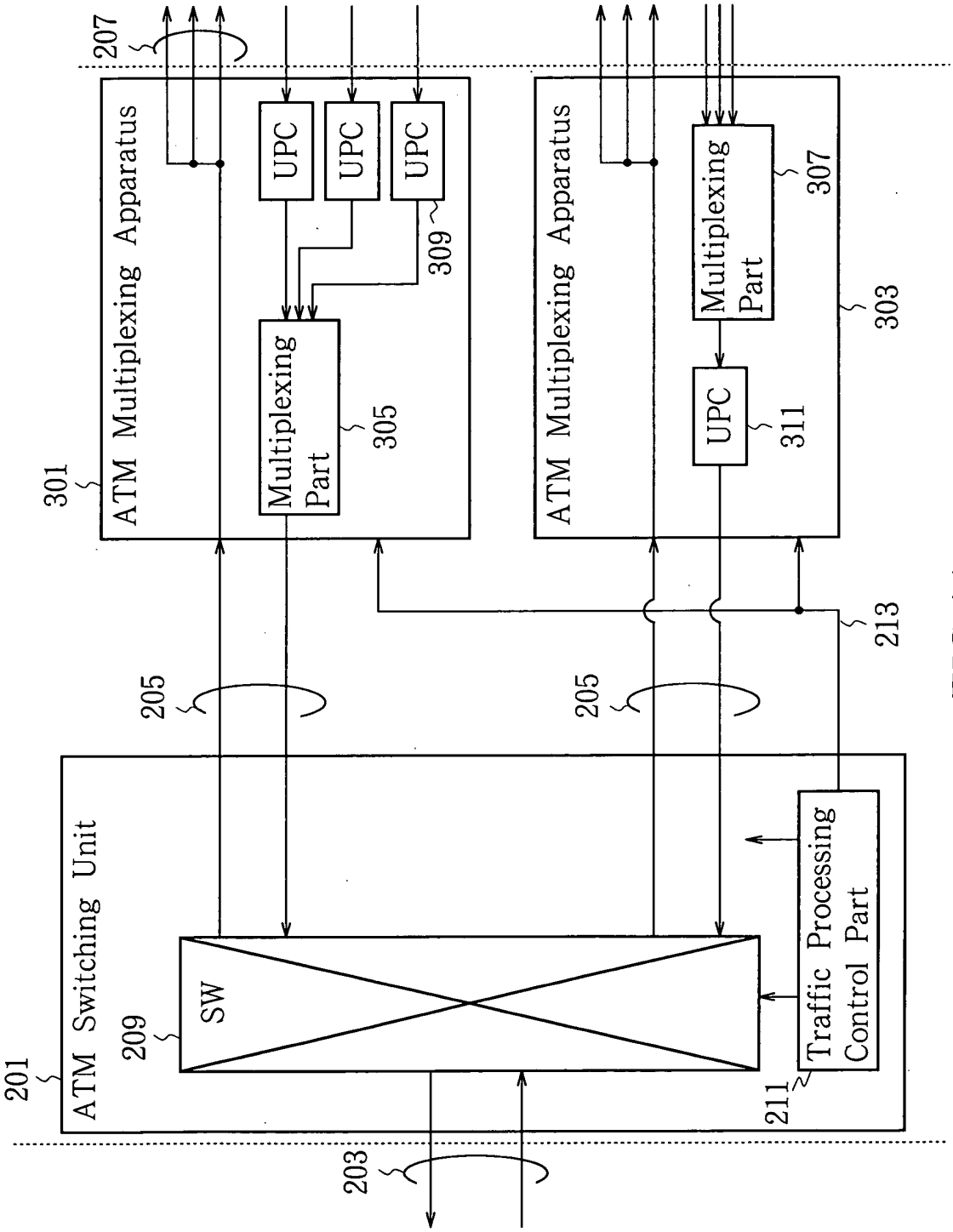
ATM Switching Unit
201
SW
209
Traffic Processing Control Part
211
203
205
205
213
ATM Multiplexing Apparatus
301
UPC
UPC
UPC
309
Multiplexing Part
305
207
ATM Multiplexing Apparatus
303
Multiplexing Part
307
UPC
311

FIG.11